# BEFORE THE PUBLIC UTILITIES COMMISSION

#### OF THE STATE OF HAWAII

In the Matter of the Application of	)				
PUBLIC UTILITIES COMMISSION	)	DOCKET NO. 2008-0273	3		
Instituting a Proceeding to Investigate the Implementation of Feed-in Tariffs.	) ) ) .		PUBLIC UTILITIES	2010 FEB 16 P 3 08	FILED

# TAWHIRI POWER LLC'S INFORMATION REQUESTS TO HAWAIIAN ELECTRIC COMPANY, INC., MAUI ELECTRIC COMPANY, LIMITED, AND HAWAII ELECTRIC LIGHT COMPANY, INC.

AND

#### **CERTIFICATE OF SERVICE**

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# OF THE STATE OF HAWAII

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# TAWHIRI POWER LLC'S INFORMATION REQUESTS TO HAWAIIAN ELECTRIC COMPANY, INC., MAUI ELECTRIC COMPANY, LIMITED, AND HAWAII ELECTRIC LIGHT COMPANY, INC.

TO THE HONORABLE PUBLIC UTILITIES COMMISSION OF THE STATE OF HAWAII:

Pursuant to the Hawaii Public Utilities Commission's (the "Commission") Order Setting Schedule filed herein on October 29, 2009 ("Scheduling Order") with respect to the "Parties Information Requests on Reliability Standards and Queuing and Interconnection Procedures", as amended, TAWHIRI POWER LLC ("TPL") hereby submits its Information Requests to Hawaiian Electric Company, Inc., Maui Electric Company, Limited, and Hawaii Electric Light Company, Inc. ("HECO Companies") as follows:

## INFORMATION REQUESTS

#### TPL-HECO-IR-1

You state on Page 4 of the Reliability Report ("Report") that "Due primarily to the high level of existing and planned renewable resource penetration on the MECO and HELCO systems, the studies indicate that there is minimal to no room at this time to accommodate additional renewable resources (FIT or otherwise) without significant curtailment of either existing or planned renewable resources, or a threat to system reliability." Please quantify what do you mean by "significant curtailment"?

#### **TPL-HECO-IR-2**

You also state on Page 4 of the Report that "the integration of FIT resources on the HELCO and MECO systems may have to be temporarily deferred until additional studies can be performed and/or infrastructure developed":

- A. How much time will it take to perform the "additional studies" for the Big Island?
- B. When you say "and/or" do you mean the infrastructure can be developed without undertaking the additional studies?
- C. How much time will it take to develop the needed infrastructure improvement?
- D. Please describe the type of infrastructure upgrades that would be needed to allow inte0grating FIT resources into the HELCO system?
- E. What will be the potential cost of such upgrades?

## TPL-HECO-IR-3

You advocate on Page 4 of the Report "convening a Reliability Standards Working Group that would serve as an open and transparent forum to allow stakeholders and technical experts an opportunity to regularly review and provide input to the studies that are described in this report and the attachments thereto". You also recommend that the Reliability Standards Working Group not be restricted to the FIT parties but include representatives with a range of technical expertise (e.g., the United States Department of Energy, Electric Power Research Institute ("EPRI") and the Hawaii Natural Energy Institute).

- A. Are you implying that the existing IPPs would have to be FIT parties to be able to participate in the proposed Working Group?
- B. Is HECO willing to forward to the Commission competing proposals for the structure, conduct and scope of activities of the Working Group?

#### TPL-HECO-IR-4

On Page 5 of the Report you make the assertion that "as this process will be ongoing and require some level of flexibility to respond to changing system conditions, the Working

Group process should be organized and facilitated separately from the Companies' Clean Energy Scenario Planning process".

- A. Which of these two processes drives the other?
- B. How do you propose to consolidate the results of these two processes?
- C. Given the limited resources of many stakeholders, would you consider merging the two processes?

#### **TPL-HECO-IR-5**

You assert on Page 6 of the Report that with the existing high levels of distributed generation (DG) penetration of the HELCO system "significant dynamic stability effects on the power system are already being encountered".

- A. Please quantify what you mean by "significant".
- B. Your statement implies the observed "significant dynamic stability effects" have been separately evaluated from the effects often attributed to the renewable resources interconnected on the transmission side. Is this correct? If not please explain how you reached the aforementioned assertion.

#### TPL-HECO-IR-6

Page 16 of the Report indicates that the total capacity of existing and planned DG on the HELCO system amounts to 17.1 MWs whereas the PV portion is 14.4 MWs. Please specify what types of generation technology account for the 2.7 MWs difference.

#### TPL-HECO-IR-7

On Page 17 of the Report you state "HELCO has taken many actions to mitigate the impacts of the variable wind generation on frequency control, including modification of its AGC program and parameters". Please describe the:

A. AGC modifications that HELCO made; and

B. Other actions that HELCO undertook.

#### TPL-HECO-IR-8

In Page 17 of the Report you assert that "during periods of high variable resource output, in the absence of significant load growth, it will be difficult for the HELCO system to accommodate future and existing renewable energy resources even if all dispatchable conventional generation operates nearly twenty four hours a day at near minimum". Are you saying that even during the daily peak demand hours, curtailment would occur under the circumstances quoted above?

## TPL-HECO-IR-9

Regarding Figure 2 on Page 18 of the Report, please provide a table specifying the makeup (resource/unit names and MWs) for each of the following categories of generation resources:

- A. Maximum output from dispatchable renewable energy sources;
- B. Maximum variable renewable energy;
- C. Minimum must-run dispatchable generation;
- D. Minimum CC;
- E. Minimum Steam;
- F. Regulation; and
- G. Minimum Reserve down.

#### TPL-HECO-IR-10

Regarding Figure 2 on Page 18 of the Report, please specify whether:

- A. The Geothermal Category includes the 8-MWs PGV expansion that is under consideration?
- B. The Biomass Category includes the contemplated expansion?

#### TPL-HECO-IR-11

Does the reference to the "shaded area" in Figure 2 of the Report pertain to the gray area at the top of the graph? If so, are you saying that wind generation would be curtailed most of the day (essentially > 23 hours) during peak wind production episodes?

## **TPL-HECO-IR-12**

The Report states on Page 19 that "In light of the existing grid constraints and the urgency of the situation, HELCO proposes to defer additional variable DG interconnection requests on the HELCO system, including standard interconnection agreement and NEM requests, until appropriate mitigation measures are identified and employed to appropriately integrate additional variable DG". It further says "HELCO also plans to defer entering into Bi-lateral PPA negotiations" and "Bi-lateral negotiation cannot be guaranteed, and in fact can only proceed if such additional studies show that projects would not result in significant reliability impacts, significant curtailment of existing or planned renewable generation, or unreasonable costs to ratepayers". In light of these statements, does HELCO/HECO intend to suspend/delay entering into bi-lateral contracts that will add significant geothermal and biomass generating capacity to the system?

#### TPL-HECO-IR-13

On Page 15 of Attachment 4, the Report states that "HELCO has formal agreements in place to procure additional RE in the next two to three years, consisting of 8 MW of geothermal and approximately 24 MW of biomass energy. These resources will be dispatchable and the energy therefore available on demand except during outages and durations". Please respond the following:

- A. Please provide a copy of the aforementioned agreements.
- B. Please indicate whether HELCO/HECO is planning to defer procuring the amounts of energy specified in said agreements?
- C. If it is not possible to provide a copy of each agreement, please answer the following:
  - i. When is the planned on-line date for each facility?

- ii. Will energy delivery from the new resources be curtailed before curtailing production from any prior renewable energy resources (i.e., ones with earlier on-line dates)?
- iii. Will the new resources be compensated as Qualifying Facilities (i.e., on the basis of the posted avoided costs of generation of HELCO)?
- iv. Will output from the new resources be rolled into the HELCO avoided cost determination methodology as QFs-in only or as both QFs-in and QFs-out?
- v. Will the new resources be compensated for capacity value and/or ancillary services?
- vi. Did you evaluate the curtailment impacts of adding the new resources on existing generators?
- vii. Did you evaluate the revenue impacts of adding the new resources on existing generators?

DATED: Honolulu, Hawaii, February 16, 2010.

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#### CERTIFICATE OF SERVICE

The foregoing document was served on the date of filing by hand delivery or electronically transmitted to each such Party.

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